IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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		Examiner	: Jwalant B. Amin
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BRIEF ON APPEAL

This Appeal Brief is submitted pursuant to the Notice of Appeal filed in the U.S. Patent and Trademark Office on December 20, 2007, and in support of the appeal from the Final Rejection set forth in the Office Action mailed on September 4, 2007.

(1) Real Party in Interest

Autodesk, Inc.

(2) Related Appeals and Interferences

None.

(3) Status of Claims

Claims 1, 3-15, 17-20, 22-34 and 36-38 are pending and rejected. The rejection of claims 1, 3-15, 17-20, 22-34 and 36-38 is appealed.

(4) Status of Amendments

The claims have not been amended subsequent to final rejection. There are no unentered amendments.

(5) Summary of Claimed Subject Matter

Claim 1 recites a computer-implemented method for dynamically displaying a path between at least two geographic locations. A two-dimensional representation of three-

dimensional geographic data is displayed (e.g., Specification at § 0037 and Fig. 2B). A user input specifying an initial location on the two-dimensional representation is recited, which includes the user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position (e.g., § 0038). Additional user input is received specifying a plurality of intermediate locations and terminating with a final location, which includes receiving input corresponding to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location (e.g., § 0038). While receiving the additional user input, a great circle path is dynamically displayed extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location (e.g., § 0039). The path representing the great circle path continually increases in length as the cursor is dragged from the first cursor position to a position over the final location (e.g., § 0039).

Claim 3 recites that receiving additional user input specifying a plurality of intermediate locations includes receiving input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and inputting a second cursor position (e.g., § 0039). Claim 4 recites that a great circle distance corresponding to the great circle path is displayed and dynamically updated based on the additional user input while receiving the additional user input (e.g., § 0039 and § 0061). Claim 5 recites that an initial direction corresponding to the great circle path is displayed and dynamically updated based on the additional user input while receiving the additional user input (e.g., § 0061).

Claim 6 recites that additional user input is received specifying at least one additional final location on the two-dimensional representation (e.g., § 0042 and Fig. 3). While receiving the additional user input, a second path is dynamically displayed extending from a final location toward the additional final location (e.g., § 0042). The second path terminates at the additional final location upon completion of receipt of the additional user input. The second path represents a great circle path between the final location and the additional final location (e.g., § 0041 and 0042). Claim 7 depends from claim 6 and recites that a total great circle distance is displayed. The total great circle distance is the sum of a great circle distance corresponding to the great circle path between the initial location and the final location and the great circle distance

corresponding to the second path between the final location and the additional final location (e.g., § 0042).

Claim 8 depends from claim 1 and recites that displaying a great circle path extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location includes: displaying a first portion of the path extending from the initial location to an outer boundary of the two-dimensional representation (e.g., § 0047 and Fig. 7B); displaying a second portion of the path extending from an outer boundary of the two-dimensional representation to the final location (e.g., § 0047); and displaying a graphical element linking the first portion of the path to the second portion of the path (e.g., § 0047). The first portion and the second portion together provide the great circle path between the initial location and the final location (e.g., § 0047).

Claim 9 recites a computer-implemented method for dynamically displaying an area bounded by great circle paths. A two-dimensional representation of three-dimensional geographic data is displayed (e.g., Fig. 5). A user input is received specifying at least three locations on the two-dimensional representation, each location representing a vertex where the vertices together define an area (e.g., § 0043 and 0044). Receiving a user input specifying a location comprises receiving input corresponding to a user positioning a cursor over the location on the two-dimensional representation and inputting a cursor position (e.g., § 0047). While the user input is being received, a boundary path is dynamically displayed between adjacent locations (e.g., § 0045). Each boundary path represents a great circle path between the adjacent locations and the boundary paths together enclose an area (e.g., § 0045). The user input comprises a user dragging the cursor on the two-dimensional representation from a first cursor position to a second cursor position, where the first and second cursor positions correspond to adjacent locations (e.g., § 0047). The boundary path representing a great circle path is dynamically displayed and continually increases in length as the cursor is dragged from the first cursor position to the second cursor position (e.g., Figs. 5 and 6).

Claim 10 recites displaying a value of a three-dimensional area represented by the enclosed area on the two-dimensional representation (e.g., § 0044). Claim 11 depends from claim 10 and recites receiving a user input specifying a modification to at least one of the locations, dynamically displaying one or more modified boundary paths based on the

modification to the at least one location, and dynamically displaying a modified value of a three-dimensional area represented by a modified enclosed area on the two-dimensional representation (e.g., § 0011). Claim 12 depends from claim 11 and recites dynamically displaying a modified great circle distance corresponding to a modified cumulative distance of the boundary paths between adjacent locations (e.g., § 0011).

Claim 13 depends from claim 9 and recites displaying a great circle distance corresponding to a cumulative distance of the boundary paths between adjacent locations (e.g., § 0044). Claim 14 depends from claim 9 and recites that displaying a boundary path between at least two of the locations displaying a first portion of the boundary path and a second portion of the boundary path and a graphical element linking the first and second portions (e.g., § 0012). The first portion extends from a first location to an outer boundary of the two-dimensional representation. The second portion extends from an outer boundary of the two-dimensional representation to an adjacent, second location. The first portion and the second portion together comprise the great circle path between the first location and the second location (e.g., § 0012).

Claim 15 recites a computer-implemented method for dynamically displaying a path between at least two geographic locations. The method includes displaying a two-dimensional representation of three-dimensional geographic data and receiving a user input specifying an initial location on the two-dimensional representation (e.g., § 0064). Additional user input is received specifying a plurality of intermediate locations and terminating with a final location (e.g., § 0064). A path of constant direction is displayed extending from the initial location toward each of the plurality of intermediate locations and ultimately terminating at the final location (e.g., § 0064). Receiving a user input specifying the initial location comprises receiving input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position. Receiving additional user input specifying a plurality of intermediate locations comprises receiving input corresponding to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location. Dynamically displaying a path of constant direction comprises displaying a path of constant direction continually increasing in length as the cursor is dragged from the first cursor position to a position over the final location (e.g., § 0064).

Claim 17 depends from claim 15 and recites that receiving user input specifying the initial location comprises receiving user input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position (e.g., § 0038). Claim 17 further recites that receiving additional user input specifying a plurality of intermediate locations comprises a receiving input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and inputting a second cursor position (e.g., § 0038).

Claim 18 recites displaying a distance corresponding to the distance of the path of constant direction and dynamically updating the distance based on the additional user input while receiving the additional user input (e.g., § 0013). Claim 19 recites displaying a direction of the path of constant direction (e.g., § 0065).

Claim 20 recites a computer program product, tangibly stored on a computer-readable medium, for dynamically displaying a path between at least two geographic locations, comprising instructions operable to cause a programmable processor to display a two-dimensional representation of three-dimensional geographic data and receive a user input specifying an initial location on the two-dimensional representation, the user input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position (e.g., § 0038). Additional user input is received specifying a plurality of intermediate locations and terminating with a final location, the additional user input corresponding to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location (e.g., § 0038). While receiving the additional user input, a great circle path is dynamically displayed extending from the initial location toward each of the plurality of intermediate locations and ultimately terminating at the final location. Dynamically displaying a great circle path comprises displaying a path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to a position over the final location (e.g., § 0039).

Claim 22 recites that instructions operable to receive additional user input specifying a plurality of intermediate locations comprise instructions operable to receive input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and entering a second cursor position (e.g., § 0039). Claim 23 recites instructions operable to display

a great circle distance corresponding to the great circle path and to dynamically update the great circle distance based on the additional user input while receiving the additional user input (e.g., § 0039 and § 0061). Claim 24 recites instructions operable to display an initial direction corresponding to the great circle path and dynamically update the initial direction based on the additional user input while receiving the additional user input (e.g., § 0061).

Claim 25 recites instructions operable to receive additional user input specifying at least one additional final location on the two-dimensional representation. While receiving the additional user input, a second path is dynamically displayed extending from a final location toward the additional final location. The second path terminates at the additional final location upon completion of receipt of the additional user input and represents a great circle path between the final location and the additional final location (e.g., § 0041 and 0042). Claim 26 depends from claim 25 and recites instructions operable to display a total great circle distance being the sum of a great circle distance corresponding to the great circle path between the initial location and the final location and the great circle distance corresponding to the second path between the final location and the additional final location (e.g., § 0042).

Claim 27 depends from claim 20 and recites that instructions operable to display a great circle path extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location comprise instructions operable to display first and second portions of the path and a graphical element linking the portions (e.g., § 0047). The first portion extends from the initial location to an outer boundary of the two-dimensional representation. The second portion extends from an outer boundary of the two-dimensional representation to the final location. The first portion and the second portion together comprise the great circle path between the initial location and the final location (e.g., § 0047).

Claim 28 recites a computer program product, tangibly stored on a computer-readable medium, for displaying an area bounded by great circle paths, comprising instructions operable to cause a programmable processor to display a two-dimensional representation of three-dimensional geographic data and to receive a user input specifying at least three locations on the two-dimensional representation, each location representing a vertex where the vertices together define an area (e.g., § 0043 and 0044). The user input corresponds to a user positioning a cursor over the location on the two-dimensional representation and inputting a cursor position. While

receiving the user input, a boundary path is dynamically displayed between adjacent locations, where each boundary path represents a great circle path between the adjacent locations and where the boundary paths together enclose an area. The user input corresponds to a user dragging the cursor on the two-dimensional representation from a first cursor position to a second cursor position, where the first and second cursor positions correspond to adjacent locations. A boundary path representing a great circle path is dynamically displayed that continually increases in length as the cursor is dragged from the first cursor position to the second cursor position (e.g., § 0044 and 0045).

Claim 29 recites instructions operable to display a value of a three-dimensional area represented by the enclosed area on the two-dimensional representation (e.g., § 0044). Claim 30 depends from claim 29 and recites instructions operable to receive a user input specifying a modification to at least one of the locations and to dynamically display one or more modified boundary paths based on the modification to the at least one location. A modified value is displayed of a three-dimensional area represented by a modified enclosed area on the two-dimensional representation (e.g., § 0011). Claim 31 depends from claim 30 and recites instructions operable to dynamically display a great circle distance corresponding to a modified cumulative distance of the boundary paths between adjacent locations (e.g., § 0011).

Claim 32 depends from claim 28 and recites instructions operable to display a great circle distance corresponding to a cumulative distance of the boundary paths between adjacent locations (e.g., § 0044). Claim 33 recites that instructions operable to display a boundary path between at least two of the locations comprise instructions operable to display a first portion and a second portion of the boundary path and a graphical element linking the portions (e.g., § 0012). The first portion extends from a first location to an outer boundary of the two-dimensional representation. The second portion extends from an outer boundary of the two-dimensional representation to an adjacent, second location. The first portion and the second portion together comprise the great circle path between the first location and the second location (e.g., § 0012).

Claim 34 recites a computer program product, tangibly stored on a computer-readable medium, for dynamically displaying a path between at least two geographic locations, comprising instructions operable to cause a programmable processor to display a two-dimensional representation of three-dimensional geographic data and to receive a user input

specifying an initial location on the two-dimensional representation (e.g., § 0064). The user input corresponds to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position (e.g., § 0064). Additional user input is received specifying a plurality of intermediate locations and terminating with a final location (e.g., § 0064). The additional user input corresponds to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location. A path of constant direction is dynamically displayed extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location (e.g., § 0064). The path of constant direction is displayed continually increasing in length as the cursor is dragged from the first cursor position to a position over the final location (e.g., § 0064).

Claim 36 recites that instructions operable to receive additional user input specifying a plurality of intermediate locations comprise instructions operable to receive input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and entering a second cursor position (e.g., § 0038). Claim 37 recites instructions operable to display a distance corresponding to a distance of the path of constant direction and dynamically update the distance based on the additional user input while receiving the additional user input (e.g., § 0013). Claim 38 recites instructions operable to display a direction of the path of constant direction (e.g., § 0065).

(6) Grounds of Rejection to be Reviewed on Appeal

The Examiner rejected claims 1, 3, 4, 6-8, 20, 22, 23 and 25-27 under 35 U.S.C. 103(a) as being unpatentable over Gazza Interactive Maps ("Nicholson") in view of ChooseClimate and further in view of Microsoft Draw.

The Examiner rejected claims 9-14 and 28-33 under 35 U.S.C. 103(a) as being unpatentable over "Welcome to Autodesk Onsite [Autodesk Onsite Help: authpub]", 2002 ("Autodesk Onsite") in view of Nicholson, ChooseClimate and Microsoft Draw.

The Examiner rejected claims 5 and 24 under 35 U.S.C. 103(a) as being unpatentable over Nicholson in view of ChooseClimate and Microsoft Draw and further in view of Autodesk Onsite.

The Examiner rejected claims 15, 17-19, 34 and 36-38 under 35 U.S.C. 103(a) as being unpatentable over Autodesk Onsite further in view of MapProjections and further in view of Microsoft Draw.

(7) Argument

(a) Claims 1, 3, 4, 6-8, 20, 22, 23 and 25-27 are not properly rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson in view of ChooseClimate and further in view of Microsoft Draw.

Claims 1 and 3-8

Claim 1 recites a computer-implemented method for dynamically displaying a path between at least two geographic locations. The Examiner rejected claim 1 under 35 U.S.C. 103(a) as being unpatentable over Nicholson in view of ChooseClimate and further in view of Microsoft Draw. Claim 1 includes a step of "while receiving the additional user input, dynamically displaying a great circle path extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location". Claim 1 further recites that "dynamically displaying a great circle path comprises displaying a path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to a position over the final location".

The method recited in claim 1 provides that a user can position a cursor over the initial location and input a first cursor position (*e.g.*, if using a mouse, the user can "click" on the position, although other user controls can be used, and this is but one example). The user can then drag the cursor over the map to a position over the final location. As the user drags the cursor, a path extending from the first cursor position to various positions of the moving cursor being dragged [the various positions described in the claims as the plurality of intermediate locations] is displayed; the path represents the great circle path from the first cursor position to the moving position of the cursor while being dragged. By way of illustrative example, the user may drag the cursor in a straight line from the initial location to the final location, in effect tracing a user-path across the map as the cursor is dragged. However, the user-path traced by the user in dragging the path across the map is not representative of the path displayed. Rather, the

great circle path is dynamically calculated and displayed, being continually updated as the cursor is dragged. In this example, where the user-path traced is a straight line, this path would not coincide with the great circle path, which generally is not a straight line between two points, as the great circle path accounts for the curvature of the Earth and typically is curved. This is the dynamic aspect of the method. That is, the path is dynamically displayed while the cursor is moving to a position over the final location and the path represents a great circle path.

The Examiner asserts that ChooseClimate "teaches to dynamically display a great circle path and calculate the great circle distance between two selected locations". The applicant respectfully disagrees with this assertion. ChooseClimate shows a changing latitude and longitude represented by a cursor location as the cursor location moves across the map display, but there is no showing of a corresponding great circle path nor great circle distance while this happens. No path is displayed until two cursor locations are selected by the user and a "view journey" button is selected, nor is the great circle distance shown.

In any event, the Examiner acknowledges that the combination of Nicholson and ChooseClimate do not teach to dynamically display a path that continually increases in length as the cursor is dragged from the first cursor position to a position over the final location. In this regard, the Examiner relies on Microsoft Draw. The Examiner asserts that Microsoft Draw "teaches to select a line tool and position the cursor at the first location, holding and dragging the mouse from the start position until the mouse button is released". The Examiner further asserts that "the location where the mouse button is released is considered the final position; the length of the line keeps on increasing as the user moves from the start position to the final position". The Examiner's position is that it would have been obvious to one of ordinary skill in the art to display the path of the line that is being drawn by the user as taught by Microsoft Draw and apply this functionality into the method of Nicholson and ChooseClimate to dynamically display the great circle path.

The applicant respectfully submits that the Examiner has misconstrued what is meant by "dynamically displaying a great circle path" in claim 1. As discussed above, the path displayed is not the user-path traced on the map by the user, but rather is a great circle path from the initial location to the current cursor position, which dynamically changes as the cursor is moved. By contrast, Microsoft Draw merely shows that a user can draw a line, where the position of the line

is controlled by the user's dragging of a cursor. There is no dynamic calculation and display of a great circle path taught by Microsoft, nor by either Nicholson or ChooseClimate. The Examiner states that Microsoft Draw teaches that "the length of the line keeps on increasing as the user moves from the start position to the final position". However, as the Examiner states, it is just a line. That is, a line from one position to another. By contrast, claim 1 recites the display of a dynamic great circle path. The great circle path is not merely a line between two cursor positions; rather it represents the great circle path calculated as between the two geographic locations represented by the two cursor positions, where one cursor position is dynamically moving. The applicant respectfully submits that none of the prior art references cited by the Examiner disclose dynamically displaying a great circle path as recited in Claim 1. Therefore, even in combination, the method recited is not disclosed.

As the prior art references cited by the Examiner do not teach or suggest all of the claim limitations, the applicant respectfully submits claim 1 is in condition for allowance, as are claims 3-8 which depend therefrom.

Claims 20 and 22-27

Claim 20 recites a computer program product for dynamically displaying a path between at least two geographic locations. The computer program product includes instructions operable to cause a programmable processor to take certain steps recited, including dynamically displaying a great circle path between initial and final locations. For at least the reasons discussed above in reference to claim 1, the Nicholson reference in view of ChooseClimate and Microsoft Draw does not disclose such a dynamic display. Claim 20 is therefore in condition for allowance, as are claims 22-27 which depend therefrom.

(b) Claims 9-14 and 28-33 are not properly rejected under 35 U.S.C. 103(a) as being unpatentable over Autodesk Onsite in view of Nicholson, ChooseClimate and Microsoft Draw.

Claims 9-14 and 28-33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Autodesk Onsite in view of Nicholson in view of ChooseClimate and in view of Microsoft Draw. Claim 9 recites a method for dynamically displaying an area bounded by great circle paths. Included in the recited method is "dynamically displaying a boundary path representing a great

circle path that continually increases in length as the cursor is dragged from the first cursor position to the second cursor position."

As discussed above in relation to claim 1, the references of Nicholson, ChooseClimate and Microsoft Draw do not, either alone or in combination, disclose this limitation. Further, this is not disclosed by Autodesk Onsite, which is conceded by the Examiner, wherein he states that "Autodesk and Nicholson …do not explicitly teach to dynamically display the great circle path".

As the prior art references cited by the Examiner do not teach or suggest all of the claim limitations, the applicant respectfully submits claim 9 is in condition for allowance, as are claims 10-14 which depend therefrom.

Claim 28 recites a computer program product for displaying an area bounded by great circle paths. The computer program product includes instructions operable to cause a programmable processor to take certain steps recited, including dynamically displaying a boundary path between adjacent locations. For at least the reasons discussed above in reference to claims 1 and 9, the prior art references cited by the Examiner do not teach or suggest all of the claim limitations of claim 28, which is therefore in condition for allowance, as are claims 29-33 which depend therefrom.

(c) Claims 5 and 24 are not properly rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson in view of ChooseClimate and Microsoft Draw and further in view of Autodesk Onsite.

The Examiner rejected claims 5 and 24 under 35 U.S.C. 103(a) as being unpatentable over Nicholson in view of ChooseClimate and Microsoft Draw and further in view of Autodesk Onsite. Claim 5 depends from claim 1 and claim 24 depends from claim 20. Both claims 1 and 20 recite dynamically displaying a great circle path including "displaying a path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to a position over the final location". As discussed above in reference to claim 9, the four references cited by the Examiner do not, either alone or in combination, disclose this limitation. Accordingly, as the base claims are allowable over the cited art, so are the dependent claims 5 and 24.

(d) Claims 15, 17-19, 34 and 36-38 are not properly rejected under 35 U.S.C. 103(a) as being unpatentable over Autodesk Onsite further in view of MapProjections and further in view of Microsoft Draw.

Claims 15 and 17-19

Claim 15 recites a method for dynamically displaying a path between at least two geographic locations. The method includes dynamically displaying a path of constant direction extending from an initial location toward each of a plurality of intermediate locations and ultimately terminating at a final location. A path of constant direction is different than a great circle path; a great circle path constantly changes direction. By contrast, a path of constant direction keeps a constant direction; sailors often used this technique for charting a course. Once the appropriate direction was determined, the sailor maintained a constant compass direction to travel from an initial location to a final location (see Specification p. 15, para. 64).

Autodesk Onsite discloses displaying a great circle path, as contrasted to a path of constant direction, which is acknowledged by the Examiner (Office Action, p.13). The Examiner relies on MapProjections as allegedly teaching that "any straight line on the map is line [*sic*] of constant direction" (Office Action, p.13), referring to page 3 of the MapProjections reference. The applicant respectfully disagrees with the Examiner. MapProjections simply describes that a rhumb line is a line of constant direction and, on the map described in the reference, is a represented as a straight line on the map. The reference is referring to a Mercator Projection map (see p.3). A Mercator Projection map is a cylindrical map projection.

Claim 15 recites that a user can specify the initial location by positioning a cursor over a first cursor position and inputting the first cursor position. The user can then drag the position of the cursor through various intermediate locations while advancing toward a final location. As the cursor is dragged, a path of constant direction continually increasing in length as the cursor is dragged from the first cursor position to a position over the final location is displayed. This dynamic display of a path of constant direction is not disclosed or suggested by the references cited by the Examiner.

Autodesk Onsite does not disclose a dynamic display of a path of constant direction. MapProjections merely describes that on a Mercator Projection map a path of constant direction is represented by a straight line. Microsoft Draw merely discloses user drawing a line between two points. None of these references disclose dynamically displaying a line of constant direction as recited in claim 15. Accordingly, claim 15 is in condition for allowance, as are claims 17-19 depending therefrom.

Claims 34 and 36-38

Claim 34 recites a computer program product for dynamically displaying a path between at least two geographic locations. The computer program product includes instructions operable to cause a programmable processor to take certain steps recited, including dynamically displaying a path of constant direction extending from an initial location toward each of a plurality of intermediate locations and termination at a final location. For at least the reasons discussed above in reference to claim 15, the Autodesk Onsite reference in view of MapProjections and Microsoft Draw does not disclose such a dynamic display. Claim 34 is therefore in condition for allowance, as are claims 36-38 which depend therefrom.

(8) Conclusion

The rejections of record are clearly improper and without basis and should be withdrawn. Moreover, it is respectfully submitted that all of the claims are in condition for allowance, and a notice of allowance is respectfully requested.

The brief fee in the amount of $510 and the extension of time fee in the amount of $120 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 15786-002001.

Respectfully submitted,

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Appendix of Claims

1. A computer-implemented method for dynamically displaying a path between at least two geographic locations, comprising:

displaying a two-dimensional representation of three-dimensional geographic data;

receiving a user input specifying an initial location on the two-dimensional representation;

receiving additional user input specifying a plurality of intermediate locations and terminating with a final location; and

while receiving the additional user input, dynamically displaying a great circle path extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location;

wherein:

receiving a user input specifying the initial location comprises receiving input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position;

receiving additional user input specifying a plurality of intermediate locations comprises receiving input corresponding to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location; and

dynamically displaying a great circle path comprises displaying a path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to a position over the final location.

2. Cancelled.

3. The method of claim 1, wherein:

receiving user input specifying the initial location comprises receiving user input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position; and

receiving additional user input specifying a plurality of intermediate locations comprises the receiving input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and inputting a second cursor position.

4. The method of claim 1, further comprising:

displaying a great circle distance corresponding to the great circle path, including dynamically updating the great circle distance based on the additional user input while receiving the additional user input.

5. The method of claim 1, further comprising:

displaying an initial direction corresponding to the great circle path, including dynamically updating the initial direction based on the additional user input while receiving the additional user input.

6. The method of claim 1, further comprising:

receiving additional user input specifying at least one additional final location on the two-dimensional representation; and

while receiving the additional user input, dynamically displaying a second path extending from a final location toward the additional final location, the second path terminating at the

additional final location upon completion of receipt of the additional user input and the second path representing a great circle path between the final location and the additional final location.

7. The method of claim 6, further comprising:

displaying a total great circle distance being the sum of a great circle distance corresponding to the great circle path between the initial location and the final location and the great circle distance corresponding to the second path between the final location and the additional final location.

8. The method of claim 1, wherein displaying a great circle path extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location, comprises:

displaying a first portion of the path, the first portion extending from the initial location to an outer boundary of the two-dimensional representation;

displaying a second portion of the path, the second portion extending from an outer boundary of the two-dimensional representation to the final location; and

displaying a graphical element linking the first portion of the path to the second portion of the path, wherein the first portion and the second portion together comprise the great circle path between the initial location and the final location.

9. A computer-implemented method for dynamically displaying an area bounded by great circle paths, comprising:

displaying a two-dimensional representation of three-dimensional geographic data;

receiving a user input specifying at least three locations on the two-dimensional

representation, each location representing a vertex where the vertices together define an area;

while receiving the user input, dynamically displaying a boundary path between adjacent locations, where each boundary path represents a great circle path between the adjacent locations and where the boundary paths together enclose an area;

wherein receiving a user input specifying a location comprises receiving input corresponding to a user positioning a cursor over the location on the two-dimensional representation and inputting a cursor position; and

wherein dynamically displaying a boundary path between adjacent locations while receiving the user input comprises receiving input corresponding to a user dragging the cursor on the two-dimensional representation from a first cursor position to a second cursor position, where the first and second cursor positions correspond to adjacent locations, and dynamically displaying a boundary path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to the second cursor position.

10. The method of claim 9, further comprising:

displaying a value of a three-dimensional area represented by the enclosed area on the two-dimensional representation.

11. The method of claim 10, further comprising:

receiving a user input specifying a modification to at least one of the locations;

dynamically displaying one or more modified boundary paths based on the modification to the at least one location; and

dynamically displaying a modified value of a three-dimensional area represented by a modified enclosed area on the two-dimensional representation.

12. The method of claim 11, further comprising:

dynamically displaying a modified great circle distance corresponding to a modified cumulative distance of the boundary paths between adjacent locations.

13. The method of claim 9, further comprising:

displaying a great circle distance corresponding to a cumulative distance of the boundary paths between adjacent locations.

14. The method of claim 9, wherein displaying a boundary path between at least two of the locations comprises:

displaying a first portion of the boundary path, the first portion extending from a first location to an outer boundary of the two-dimensional representation;

displaying a second portion of the boundary path, the second portion extending from an outer boundary of the two-dimensional representation to an adjacent, second location; and

displaying a graphical element linking the first portion of the boundary path to the second portion of the boundary path, wherein the first portion and the second portion together comprise the great circle path between the first location and the second location.

15. A computer-implemented method for dynamically displaying a path between at least two geographic locations, comprising:

displaying a two-dimensional representation of three-dimensional geographic data;

receiving a user input specifying an initial location on the two-dimensional

representation;

receiving additional user input specifying a plurality of intermediate locations and terminating with a final location; and

dynamically displaying a path of constant direction extending from the initial location toward each of the plurality of intermediate locations and ultimately terminating at the final location,

wherein:

receiving a user input specifying the initial location comprises receiving input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position;

receiving additional user input specifying a plurality of intermediate locations comprises receiving input corresponding to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location; and

dynamically displaying a path of constant direction comprises displaying a path of constant direction continually increasing in length as the cursor is dragged from the first cursor position to a position over the final location.

16. Cancelled.

17. The method of claim 15, wherein:

receiving user input specifying the initial location comprises receiving user input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position; and

receiving additional user input specifying a plurality of intermediate locations comprises a receiving input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and inputting a second cursor position.

18. The method of claim 15, further comprising:

displaying a distance corresponding to the distance of the path of constant direction, including dynamically updating the distance based on the additional user input while receiving the additional user input.

19. The method of claim 15, further comprising:

displaying a direction of the path of constant direction.

20. A computer program product, tangibly stored on a computer-readable medium, for dynamically displaying a path between at least two geographic locations, comprising instructions operable to cause a programmable processor to:

display a two-dimensional representation of three-dimensional geographic data;

receive a user input specifying an initial location on the two-dimensional representation;

receive additional user input specifying a plurality of intermediate locations and terminating with a final location; and

while receiving the additional user input, dynamically display a great circle path extending from the initial location toward each of the plurality of intermediate locations and ultimately terminating at the final location.

wherein:

instructions operable to cause a processor to receive a user input specifying the

initial location comprise instructions operable to cause a processor to receive input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position;

instructions operable to cause a processor to receive additional user input specifying a plurality of intermediate locations comprise instructions operable to receive input corresponding to a user dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location; and

dynamically displaying a great circle path comprises displaying a path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to a position over the final location.

21. Cancelled.

22. The computer program product of claim 20, wherein:

instructions operable to receive user input specifying the initial location comprise instructions operable to receive user input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and entering a first cursor position; and

instructions operable to receive additional user input specifying a plurality of intermediate locations comprise instructions operable to receive input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and entering a second cursor position.

23. The computer program product of claim 20, further comprising instructions operable to:

display a great circle distance corresponding to the great circle path and dynamically

update the great circle distance based on the additional user input while receiving the additional user input.

24. The computer program product of claim 20, further comprising instructions operable to:

display an initial direction corresponding to the great circle path and dynamically update the initial direction based on the additional user input while receiving the additional user input.

25. The computer program product of claim 20, further comprising instructions operable to:

receive additional user input specifying at least one additional final location on the two-dimensional representation; and

while receiving the additional user input, dynamically display a second path extending from a final location toward the additional final location, the second path terminating at the additional final location upon completion of receipt of the additional user input and the second path representing a great circle path between the final location and the additional final location.

26. The computer program product of claim 25, further comprising instructions operable to:

display a total great circle distance being the sum of a great circle distance corresponding to the great circle path between the initial location and the final location and the great circle distance corresponding to the second path between the final location and the additional final location.

27. The computer program product of claim 20, wherein instructions operable to display a great circle path extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location, comprise instructions operable to:

display a first portion of the path, the first portion extending from the initial location to an

outer boundary of the two-dimensional representation;

display a second portion of the path, the second portion extending from an outer boundary of the two-dimensional representation to the final location; and

display a graphical element linking the first portion of the path to the second portion of the path, wherein the first portion and the second portion together comprise the great circle path between the initial location and the final location.

28. A computer program product, tangibly stored on a computer-readable medium, for displaying an area bounded by great circle paths, comprising instructions operable to cause a programmable processor to:

display a two-dimensional representation of three-dimensional geographic data;

receive a user input specifying at least three locations on the two-dimensional representation, each location representing a vertex where the vertices together define an area;

while receiving the user input, dynamically display a boundary path between adjacent locations, where each boundary path represents a great circle path between the adjacent locations and where the boundary paths together enclose an area;

wherein instructions operable to receive a user input specifying a location comprise instructions operable to receive input corresponding to a user positioning a cursor over the location on the two-dimensional representation and inputting a cursor position; and

wherein instructions operable to dynamically display a boundary path between adjacent locations while receiving the user input comprise instructions operable to receive input corresponding to a user dragging the cursor on the two-dimensional representation from a first cursor position to a second cursor position, where the first and second cursor positions

correspond to adjacent locations, and dynamically display a boundary path representing a great circle path that continually increases in length as the cursor is dragged from the first cursor position to the second cursor position.

29. The computer program product of claim 28, further comprising instructions operable to:

display a value of a three-dimensional area represented by the enclosed area on the two-dimensional representation.

30. The computer program product of claim 29, further comprising instructions operable to:

receive a user input specifying a modification to at least one of the locations;

dynamically display one or more modified boundary paths based on the modification to the at least one location; and

dynamically display a modified value of a three-dimensional area represented by a modified enclosed area on the two-dimensional representation.

31. The computer program product of claim 30, further comprising instructions operable to:

dynamically display a great circle distance corresponding to a modified cumulative distance of the boundary paths between adjacent locations.

32. The computer program product of claim 28, further comprising instructions operable to:

display a great circle distance corresponding to a cumulative distance of the boundary paths between adjacent locations.

33. The computer program product of claim 28, wherein instructions operable to display a boundary path between at least two of the locations comprise instructions operable to:

display a first portion of the boundary path, the first portion extending from a first location to an outer boundary of the two-dimensional representation;

display a second portion of the boundary path, the second portion extending from an outer boundary of the two-dimensional representation to an adjacent, second location; and

display a graphical element linking the first portion of the boundary path to the second portion of the boundary path, wherein the first portion and the second portion together comprise the great circle path between the first location and the second location.

34. A computer program product, tangibly stored on a computer-readable medium, for dynamically displaying a path between at least two geographic locations, comprising instructions operable to cause a programmable processor to:

display a two-dimensional representation of three-dimensional geographic data;

receive a user input specifying an initial location on the two-dimensional representation;

receive additional user input specifying a plurality of intermediate locations and terminating with a final location; and

dynamically display a path of constant direction extending from the initial location toward each of the plurality of intermediate locations and terminating at the final location

wherein:

instructions operable to receive a user input specifying the initial location comprise instructions operable to receive input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and inputting a first cursor position;

instructions operable to receive additional user input specifying a plurality of intermediate locations comprise instructions operable to receive input corresponding to a user

dragging the cursor on the two-dimensional representation from the first cursor position to a position over the final location; and

instructions operable to dynamically display a path of constant direction comprise instructions operable to display a path of constant direction continually increasing in length as the cursor is dragged from the first cursor position to a position over the final location.

35. Cancelled.

36. The computer program product of claim 34, wherein:

instructions operable to receive user input specifying the initial location comprise instructions operable to receive user input corresponding to a user positioning a cursor over the initial location on the two-dimensional representation and entering a first cursor position; and

instructions operable to receive additional user input specifying a plurality of intermediate locations comprise instructions operable to receive input corresponding to a user positioning the cursor over the final location on the two-dimensional representation and entering a second cursor position.

37. The computer program product of claim 34, further comprising instructions operable to:

display a distance corresponding to a distance of the path of constant direction and dynamically update the distance based on the additional user input while receiving the additional user input.

38. The computer program product of claim 34, further comprising instructions operable to:

display a direction of the path of constant direction.

Evidence Appendix

None.

Related Proceedings Appendix

None.